



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/878,842	06/11/2001	Johann Engelhardt	LASP: 112_US_	3088
24041	7590	03/29/2004	EXAMINER	
SIMPSON & SIMPSON, PLLC 5555 MAIN STREET WILLIAMSVILLE, NY 14221-5406			PYO, KEVIN K	
			ART UNIT	PAPER NUMBER
			2878	
DATE MAILED: 03/29/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/878,842

Applicant(s)

ENGELHARDT, JOHANN

Examiner

Kevin Pyo

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,5,8 and 10-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4,5,8,10-21 and 27-31 is/are rejected.
- 7) ☒ Claim(s) 22-26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Claim Objections***

1. Claims 8 and 15 are objected to because of the following informalities:

In claim 8, line 3, "energy interacting" should be changed to --interacting energy--.

In claim 15, line 3, "a optical" should be changed to --an optical--.

In claim 15, line 7, "energy interacting" should be changed to --interacting energy--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

2. Claims 1, 4, 5, 8, 10-14, 30 and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the light beam" in line 5. There is insufficient antecedent basis for this limitation in the claim. In addition, it is unclear what element is used to accomplish the recited "switching" step of claim 1. Is it a temperature control loop (14 and 15), or a driver (11) or the combination of both? Clarification is required.

Claim 8 recites the limitation "the light beam" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claims not specifically mentioned above are rejected by virtue of their dependency on a rejected claim.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1, 4, 5, 8, 10-13, 15-21 and 29 are rejected under 35 U.S.C. 102(a) as being anticipated by Japanese Patent Application No. 2000-47117 A (hereinafter Simon et al).

Regarding claim 8, as far as the claim is understood, Simon et al shows in Figs.1 and 2 the following elements of applicant's invention: a) means for determining an interacting energy with the optically active component (the temperature sensor TF and the central control unit 34), wherein the interacting energy is a drive energy of the optically active component and the light beam that interacts with the optically active component; wherein the means for determining is a temperature control loop; b) means for switching the drive energy interacting with the optically active component, wherein the means for switching is performed by a drive unit (see lines 6-11 of the SOLUTION section of the English translation of Simon et al) ; and c) means for maintaining the temperature of the optically active component at a constant level (see page 2, lines 7-12 of applicant's specification) by switching the interacting energy (although Simon et al discloses switching of frequency of the driver for the AOTF, any switching of a component will result in switching of the combination).

Regarding claim 1, the method steps recited therein are inherently disclosed by the device disclosed by Simon et al.

Regarding claims 4, 5, 10 and 29, the temperature of an optically active component is measured by a temperature sensor and the measurement value are corrected based on a previously stored correction curve (see the SOLUTION section of the English translation of Simon et al),

Regarding claims 11 and 16, Simon et al discloses the use of an acoustooptical component (AOTF) and an AOTF driver (see the SOLUTION section of the English translation of Simon et al).

Regarding claims 12 and 17, the limitations therein are disclosed in paragraph 8 of Simon et al.

Regarding claims 13 and 18, the limitations therein are disclosed in the SOLUTION section of the English translation of Simon et al.

Regarding claim 15, Simon et al shows in Figs.1 and 2 the following elements of applicant's invention: a) a light source (13.1, 13.2) for defining a light beam; b) a dichroic beam splitter (28) for directing the light beam to a scanning device and via an optical system to a specimen; c) an optically active component (AOTF) being arranged in the path of the light beam; d) a temperature control loop (the temperature sensor TF and the central control unit 34) for determining a temperature and an interacting energy with the optically active component; e) means for switching to a different energy interacting with the optically active component (see lines 6-11 of the SOLUTION section of the English translation of Simon et al); and f) means for maintaining the temperature of the optically active component at a constant level (see page 2, lines 7-12 of applicant's specification) by switching the interacting energy (although Simon et al discloses switching of frequency of the driver for the AOTF, any switching of a component will

Art Unit: 2878

result in switching of the combination), wherein the interacting energy is a drive energy of the optically active component and the light beam that interacts with the optically active component.

Regarding claim 19, it is inherent that the AOTF of Simon et al deflects a light beam.

Regarding claim 20, the limitation therein is disclosed by Simon et al (see the SOLUTION section of the English translation of Simon et al and Fig.1).

Regarding claim 21, the limitation therein is inherent in operation of the device of Simon et al.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 14, 27, 28, 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simon et al.

Regarding claims 14, 27, 28 and 30, it is well known in the art to utilize a shutter with a laser to prevent a laser beam from further moving forward in view of laser safety, and it would have been obvious to one of ordinary skill in the art to arrange after the optically active component of Simon et al in view of providing laser safety.

Regarding claim 31, the specific configuration used to switch the drive energy would have been obvious to one of ordinary skill in the art in view of and design requirements and the desired performance.

*Allowable Subject Matter*

7. Claims 22-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

The prior art fails to disclose or make obvious a scanning microscope comprising, in addition to the other recited features of the claim, the limitation of “the optically active component is impinged upon by the interaction energy even when no measurement operation and/or illumination operation is being accomplished with the scanning microscope”.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Pyo whose telephone number is (571) 272-2445. The examiner can normally be reached on Mon-Fri (with flexible hour), First Mon. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, David P. Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 2878

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin Pyo  
Primary Examiner  
Art Unit 2878

Pkk  
3/20/04